Research on the Practice of Industry Education Integration and Collaborative Education Mechanism under the Background of Digital Transformation

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Abstract: Currently, with the rapid growth of the digital economy, the acceleration of digital transformation, the digital reconstruction of production relations, and the increasing demand for digital talents in various industries, new demands have been put forward for the cultivation of digital talents. The integration of industry and education is an significant direction in the growth of vocational education today, and it has become increasingly recognized in the era of increasingly refined social division of labor. The practical teaching system of industry education integration and collaborative education has significant practical significance for building a new pattern of integrated growth of vocational education and industry, continuously improving the level of education modernization construction, and deepening the reform of vocational education system and mechanism. As a vocational education directly related to economic growth and improvement of people's livelihoods, and as the driving force in cultivating high skilled talents, how to actively align with national strategies, era growth, market demand, iterative processes, digital transformation, and integration of industry and education, and cultivate applied technical and skilled talents urgently needed for the growth of the new era, has become the era's proposition for technical colleges to achieve high-quality growth. This article studies the practice of industry education integration and collaborative education mechanisms in the context of digital transformation.

1. Introduction

With the continuous growth of science and technology, society has entered a stage of digitization and intelligence, and various industries have been affected to a certain extent [1]. In recent years, with the vigorous growth of digital technologies represented by big data, cloud computing, the Internet of Things, artificial intelligence, blockchain, etc., digital technology has gradually integrated into all aspects of social life. The continuous transformation and upgrading of global industrial digitization has become a trend, and world industrial powers such as Germany and the United States have also successively formulated relevant strategic plans [2]. Countries around the world have regarded promoting economic digitization as an significant driving force for achieving innovative growth, and have made provident arrangements in cutting-edge technology research and growth, data open sharing, privacy and security protection, and personnel training [3].

The new infrastructure and digital equipment used in various digital technologies such as industrial internet platforms, big data centers, artificial intelligence algorithms, cloud computing services, blockchain, data security, and digital consumption have enabled the rapid growth and application of the digital industry [4]. Vocational education, as the education type most closely linked with the economy and society in the field of education, under the social background of "mass entrepreneurship and innovation", "the Belt and Road", and "Made in China 2025", there are still a series of problems, such as insufficient participation of industry enterprises, low quality of talent training, etc., which is specifically reflected in the "supply side" system of vocational education talent training can not meet the needs of economic growth mode change [5]. The digital economy is a new economic form that leads the future, and digital transformation is gradually becoming a new engine for high-quality growth. The demand for digital talent is rapidly increasing. Currently, there are problems with insufficient quantity, inferior quality, and structural shortage of digital talents in

China. Under the traditional vocational education model, digital technology is mainly used as an auxiliary tool for classroom teaching and has not yet achieved a deep integration of digitalization and educational teaching. It is difficult to promote the reform and innovation of teaching models, nor is it conducive to promoting the reconstruction of teaching management systems, resulting in the growth of vocational education gradually falling behind technological changes, It is difficult to meet the demand of industry enterprises for technical and skilled talents with digital literacy [6]. Solving the talent shortage dilemma and cultivating statistical talents with digital thinking is a strong support for smoothly advancing digital reform.

Schools should keep up with the times, cultivate students with a complete professional knowledge system, and use technology to empower students with the ability to mine and analyze the value of big data [7]. When implementing the talent cultivation model of integrating industry and education, it is necessary to actively introduce the industrial resources of relevant enterprises based on the advantages and characteristics of various professions in vocational education, so that educational resources can be integrated with industrial resources and promote each other. In order to promote the reform and growth of vocational schools, and to achieve the goals of educational system and mechanism reform, it is necessary to promote the establishment of a practical teaching system with clear goal orientation, flexible organizational management, optimized resource allocation, innovative management mechanisms, and adequate institutional guarantees for the integration of industry and education, and collaborative education, in order to enhance the characteristics of vocational schools.

2. Analysis of the Current Situation and Problems in Cultivating Talents for Integration of Industry and Education

2.1. Current Situation

The new industry of China's digital economy is in its early stages, and compared to Western countries such as Europe and America, China urgently needs to explore an industrial internet platform growth model suitable for China's "integration of industrialization and industrialization" [8]. The integration of industry and education has become the main approach for talent cultivation in vocational schools in China, and how to achieve deep integration between industry and education has become one of the hot research topics [9]. At present, there are not many achievements about the talent training model of industry education integration in higher vocational education, especially the achievements about industry education integration in the context of "Internet plus".

At present, there is a lack of or insufficient participation in the growth process of personnel training plans for the integration of industry and education in vocational schools. The government has made relatively little progress in the cooperation between vocational schools and enterprises, and its function in this regard appears weak [10]. In the process of building the talent team in vocational schools, the concept of emphasizing practice while neglecting theory has been deeply rooted. Under the influence of this concept, a considerable number of vocational schools have a relative shortage of teaching staff, and the overall quality of the teaching staff is relatively low. There are also various problems that need to be solved, such as under-investment in education work. Vocational schools lack awareness of cultivating students' comprehensive qualities, and economic transformation and social change have put forward higher requirements for the integration of industry and education in vocational education. Therefore, it is immediate to pay attention to the improvement of students' comprehensive qualities to promote their sustainable growth ability.

2.2. Problem Analysis

The changes in the industry have changed the demand for digital media professionals. However, the vocational curriculum system is not perfect and systematic, which has become another important factor restricting the development of talent training mode of integration of production and education. Taking the digital media specialty as an example, the Ministry of Education scientifically analyzed the relationship among industry, occupation, post and specialty, and reserved, merged,

added, renamed and cancelled the professional catalogue of vocational education. The adjustment of digital media specialty is shown in Table 1.

Table 1 Digital Media Professional Adjustment

Professional code	Professional name	Adjustment state
050304	journalism	Unadjusted
050305	Communication studies	Unadjusted
050306	Advertising film	Unadjusted
050307	Creative media	New major
050308	Media marketing	New major
050309	Digital media technology	Unadjusted
050310	Film and TV Art	Unadjusted
050311	Network communication	Unadjusted
050312	New Media and Cultural Communication	Unadjusted
050313	Media policies and regulations	Unadjusted
050314	Media economy and management	Unadjusted

From Table 1, it can be seen that except for the name of the media marketing major that is in line with the growth of the times, the other three majors have been renamed as "big data+" majors. The professional names highlight big data, and it is urgent to combine big data with majors.

In the context of "Internet Plus", the speed of knowledge dissemination and updating is different from before, which can be described as "rapidly changing". If the course content cannot reflect modern science and technology and the latest growth achievements or is disconnected from the work process, it will lead to a lack of professional skills for students, and they will not be able to work at a "zero distance" after work. Students will be in a disadvantaged position in the enterprise, making it difficult for such students to meet and adapt to the needs of modern enterprises. In the context of industrial digital transformation, there is still a situation where outdated talent cultivation plans and existing knowledge systems are still used in the goals, teaching content, and teaching methods of talent cultivation in vocational schools. Textbooks and teaching methods are not integrated with the latest digital information technology, and professional construction is stagnant. Although vocational schools have taken into account the requirements of enterprises for graduating students when offering courses, they have not truly conducted in-depth investigations and made timely adjustments based on market demand. Some even blindly "follow the trend" and lack surveys of enterprise job demands, without their own characteristic majors. This phenomenon of "following the trend" in setting majors is not conducive to talent selection in the labor market and also not conducive to the long-term growth of vocational schools themselves.

3. Strategies for Improving the Personnel Training Model of Integrating Industry and Education in Vocational Education

3.1. Construction of a Digital Transformation System Model for Vocational Education

The digital transformation of vocational education involves various aspects of education, teaching, and teaching management. It is necessary to grasp the essence of things, carry out digital transformation work in accordance with the identification, generation, transmission, and use of numbers, and achieve cyclic iteration and continuous improvement of the digital transformation of vocational education, as shown in Figure 1.

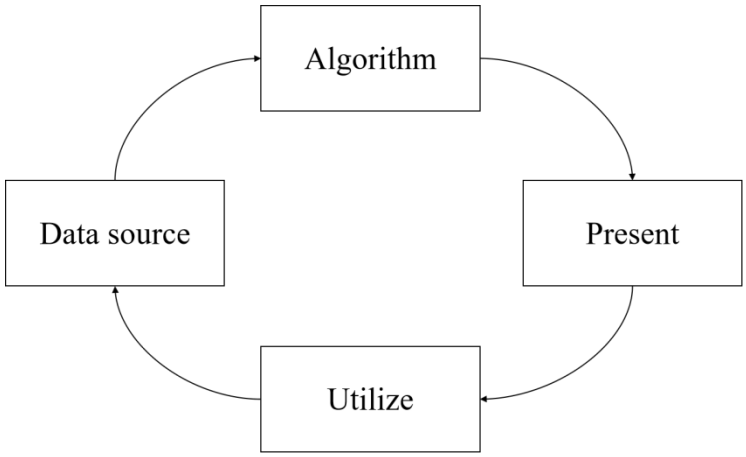

Figure 1 Digital transformation model of vocational education

The reform strategy for integrating industry and education in digital vocational education talent cultivation is supported by information processing technologies such as cloud computing and big data, and driven by innovation through internet thinking, forming a deep penetration of modern information technology in various processes of talent cultivation. Throughout the entire process of education and teaching management, various data are systematically collected, and the collected raw data is standardized and stored. Based on this, a vocational education big data with diverse sources, detailed content, and full coverage is gradually constructed to ensure the basic data supply for the digital transformation of vocational education. Using digitization as the driving force for talent cultivation, with the focus on promoting the comprehensive growth of students' overall quality and the goal of mutual benefit and win-win among all stakeholders, we aim to promote the digitization, openness, dynamism, personalization, and flexibility of the talent cultivation process. The digital transformation of vocational education is a gradual and continuously improving process, focusing on digital supply, digital processing, digital visualization processing, and digital empowerment to improve quality and efficiency. This enables circular iteration and continuous improvement, contributing to the improvement of vocational education and promoting digital empowerment to improve quality and efficiency.

3.2. Compound Training Objectives

The integration of industry and education in talent cultivation mode is the main growth direction of vocational education in the future. Guided by this direction, the scope of teaching work in vocational schools has also expanded, not only spanning the education and industry sectors, but also involving different participants. As a major characteristic of vocational education, the integration of industry and education talent cultivation model spans both the education and industry sectors, and involves many different properties of participants. Therefore, in the process of setting training goals, it is necessary to comprehensively consider the different demands of each subject, rather than relying on a single subject as the decision-maker. All functional departments of the government should use the "Internet plus" technology to collect and arrange big data based on the characteristics of regional economic growth and the direction of industrial structure adjustment, so as to determine the trend of talent demand and ultimately offer strong data support for the positioning of the training objectives of enterprises and vocational schools in the region.

While actively responding to the government's policy calls, enterprises exchange and share information on their own technological innovation and structural adjustment, production scale, and industry growth vision with various vocational schools, actively participate in the formulation and revision of talent training goals in vocational schools, and achieve the goal of using their own resource advantages to undertake some of the personnel training tasks of the school. At the same time, they share the scientific research achievements of vocational schools, making it a guarantee for the long-term development of enterprises, Be invincible in the competition. Vocational schools should insist the people-oriented cultivation concept in the teaching process. While cultivating

students' mastery of job skills, they should also attach importance to the cultivation of students' humanistic literacy and vocational general abilities, so that they can gradually establish a lifelong learning concept in the learning process.

4. Conclusions

Against the backdrop of the global trend of industrial digital transformation and upgrading, based on deep integration of industry and education and educational informatization, relying on various types of digital technologies, carrying out digital transformation of vocational education is a necessary path to improve teaching quality, promote educational innovation, and achieve modernization of vocational education. Building a practical teaching system that integrates industry and education, and fosters collaborative education. Through practical operations, students learn technology, develop skills, stimulate learning enthusiasm, cultivate team spirit and professional ethics, which is beneficial for students to organically combine knowledge and skills, and for enterprises to discover talents early, cultivate talents quickly, and reserve more talents. Deepening the talent cultivation model of industry education integration and creating a community with a shared future for schools and enterprises can not only improve the quality and employment rate of students, but also promote the process of social and economic growth. Only by investing more energy, continuously reforming and innovating, and keeping up with the times, can we meet the diverse and personalized requirements of students, and cultivate high-level digital talents who meet the requirements of national growth strategies and have generalized growth in morality, intelligence, physical fitness, aesthetics, and labor.

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